

REMARKS

This Amendment responds to the Office Action dated June 7, 2004 in which the Examiner rejected claim 10 under 35 U.S.C. § 102(b).

Applicants respectfully request the Examiner acknowledge the Information Disclosure Statement filed February 10, 2004.

As indicated above, claim 1 has been amended to make explicit what is implicit in the claim. The amendment is unrelated to a statutory requirement for patentability and does not narrow the literal scope of the claim.

Claim 10 claims a linear motor comprising a stator and a moving part. The stator includes a stator yoke extending in a motor running direction and a plurality of permanent magnets arranged on the stator yoke at regular intervals along the motor running direction in alternately reversed directions to produce alternating polarities. The moving part is positioned generally parallel to the permanent magnets of the stator and is separated therefrom by a specific gap. The moving part includes a plurality of magnetic teeth arranged side by side along the motor running direction and coils wound around the individual magnetic teeth. Each of the magnetic teeth is formed of multiple magnetic tooth elements which are held in contact with one another and which are arranged in tandem in a direction perpendicular to the motor running direction. Each of the coils is wound around the multiple magnetic tooth elements to join them together into a single structure.

Through the structure of the claimed invention a) having each magnetic tooth formed of multiple tooth elements which are held in contact with one another and b) having each coil wound around the multiple magnetic tooth elements to join them together into a single structure, as claimed in claim 10, the claimed invention

provides a linear motor which improves assembly efficiency and allows to flexibly change the device based upon a required power of the motor. The prior art does not show, teach or suggest the invention as claimed in claim 10.

Claim 10 was rejected under 35 U.S.C. § 102(b) as being anticipated by Nolle (U.S. Patent No. 5,854,521).

Applicants respectfully traverse the Examiner's rejection of the claim under 35 U.S.C. § 102(b). The claim has been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claim and allows the claim to issue.

Nolle appears to disclose, according to FIG. 1, a multi-phase arrangement for translational movement. The transverse flux machine is comprised essentially of a primary component 1 (preferably a stator) and a secondary component 2 (preferably translationally movable). The primary component 1, for a three-phase embodiment of the transverse flux machine, is comprised essentially of individual bundles (11, 12, 13, 14, etc.) of lamination elements, each such bundle being comprised of a plurality of E-shaped lamination elements (11' . . . , 12' . . . , 13' . . . , 14' . . . , etc.) (generally comprised of metal or other magnetic material), which lamination elements are assembled in aligned fashion. The extent of each bundle (11, 12, 13, 14) in the longitudinal direction of component 1 is a predetermined distance h_p . The bundles (11, 12, 13, 14) are mounted in transverse alignment along the length of the component 1. The longitudinal distance between centers (or center lines, or the like) of two neighboring bundles is $2\tau_p$. Each bundle (11, 12, 13, 14, etc.) of lamination elements has three legs (e.g.: 11a, 11b, 11c; 12a, 12b, 12c; 13a, 13b, 13c; 14a, 14b, 14c). The legs in the first set of legs (11a, 12a, 13a, 14a, . . .) aligned in the

longitudinal direction of component 1 have a common exciting winding 15. Similarly, the legs in the second such set (11b, 12b, 13b, 14b, . . .) have a common exciting winding 16 (hereinafter, the "second common winding"), which is different from the winding 15 of the first set of legs; and the legs (11c, 12c, 13c, 14c, . . .) in the third such set have yet another common winding (third common winding) 17. (Col 2, lines 10-40)

Thus, Nolle merely discloses lamination elements 11, 12, 13, 14, etc. assembled in an align fashion. Nothing in Nolle shows, teaches or suggests multiple magnetic tooth elements held in contact with one another as claimed in claim 10. Rather, Nolle merely discloses lamination elements laminated in an aligned fashion along the length of component 1.

Additionally, Nolle merely discloses that each lamination element has three legs. Nothing in Nolle shows, teaches or suggests multiple magnetic tooth elements held in contact with one another as claimed in claim 10. Rather, Nolle teaches away from the claimed invention since the legs of each lamination element are spaced apart from one another.

Finally, Nolle merely discloses each set of legs having a common exciting winding 15, 16 and 17 excited by a three-phase power signal such that the windings induce the same flux flow of phase. Nothing in Nolle shows, teaches or suggests that each coil wound around multiple tooth elements joins them together in a single structure as claimed in claim 10. Rather, Nolle merely discloses windings 15, 16 and 17 which induce the same flux flow in the set of legs of the lamination elements.

Since nothing in Nolle shows, teaches or suggests multiple magnetic tooth elements arranged with no gaps therebetween and held in contact with one another

into a single structure by a coil which is commonly wound, as claimed in claim 10, Applicants respectfully request the Examiner withdraws the rejection to claim 10 under 35 U.S.C § 102(b).

The prior art of record, which is not relied upon, is acknowledged. The references taken singularly or in combination do not anticipate or make obvious the claimed invention.

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge
our Deposit Account No. 02-4800.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

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By: 

Ellen Marcie Emas

Registration No. 32,131

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620